

Remarks

The Examiner has objected to the numbering of the claims and has renumbered claims 19 and 21-25 as 18-23. The listing of claims in this amendment refers to the corrected claims 18-23. The Examiner has rejected claims 1-5 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,729,070 to Chiu ("Chiu"), and has rejected claims 1-6, 8-13, 15, 17-20, and 22 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,450,655 to Walck et al. ("Walck et al."). In addition, the Examiner has rejected claims 6-7, 14, 16, 21, and 23 under U.S.C. §103(a) as being obvious. Specifically, claim 6 was rejected as being obvious over Chiu, claim 7 as being unpatentable over U.S. Patent No. 5,386,817 to Jones ("Jones"), and claims 7, 14, 16, 21, and 23 as being unpatentable over Walck et al. in view of Jones.

In this amendment, Applicants have amended claims 1, 8, 17, 20, and 21 and have added new claims 24-26. No new matter has been added.

Claims 1-26 are currently pending. In view of the amendments and the following remarks, Applicants respectfully request withdrawal of the rejections to claims 1-23 and allowance of new claims 26.

A. Rejections to claims 1-5 under 35 U.S.C. § 102(b):

Claims 1-5 were rejected under 35 U.S.C. §102 (b) as being anticipated by Chiu.

Chiu describes an adjustable ring light for concentrating multiple beams of light that includes a ring-shaped housing with a plurality of annularly arranged spaced openings.

Applicants have amended independent claim 1 to recite that the passage in the mounting member is in communication with the interior of the vessel. As amended, independent claim 1 recites an illumination module for transmitting radiation from a radiation source to the interior of a vessel. The module includes, among other features:

a mounting member including a leading end, a trailing end, an outer surface connecting said leading and trailing ends, a passage extending through said mounting member from said leading end to said trailing end, said passage in communication with the interior of the vessel, and a guide hole extending through said mounting member from said outer surface to said passage for communication with said passage

Applicants respectfully submit that Chiu does not describe an illumination module for transmitting radiation to the interior of a vessel, but rather describes a ring light to be used, for example, to view an object under a microscope or in an operating room. Column 1, lines 10-15. Since there is no vessel, and no vessel interior described, Applicants further submit that Chiu does not describe a mounting member having a passage “in communication with the interior of the vessel.”

Accordingly, Applicants request withdrawal of the rejections to independent claim 1 and to claims 2-5, which depend from claim 1.

B. Rejections to Claims 1-6, 8-13, 15, 17-20, and 22 under 35 U.S.C. § 102(e):

Claims 1-6, 8-13, 15, 17-20, and 22 were rejected under 35 U.S.C. §102 (e) as being anticipated by Walck et al.

Walck et al. describes an illuminating and viewing unit for illuminating the interior of a vessel in which one or more illumination ports are individually fused within a radiation non-transmitting front wall of the housing that faces the vessel interior. See, column 3, lines 35-40 and Fig. 1.

In addition to the amendment to independent claim 1, discussed above, Applicants have amended independent claims 8, and 17 to recite an interior of a vessel and a mounting member that includes a passage extending through the mounting member that is “in communication with the interior of the vessel” as discussed with respect to claim 1 in the preceding section.

To the extent that Walck et al. describes a mounting member, (and the Examiner apparently deems the housing 12 in Walck et al. to correspond to a mounting member), Applicants respectfully submit that such mounting member does not include any passage through the mounting member that is “in communication with the interior of the vessel” as recited in each of the independent claims 1, 8, and 17. On the contrary, Walck et al. describes a front wall 22 of housing 12 that seals the interior of the housing from the vessel interior. Note that front wall 22 has illumination ports 20 and detection port 24, each of the ports being made of a material that is fused to the front wall 22 “to maintain a hermetic seal between the interior of vessel 2 and the interior of housing 12.” See, column 4, lines 48-56; column 6, lines 8-12; and Figs. 1 and 2. Thus, because the passage within housing 12 is sealed off from the vessel interior, it cannot be

“in communication with the interior of the vessel” as recited in each of independent claims 1, 8, and 17.

Accordingly, withdrawal of the rejections to claims 1, 8, and 17 and to dependent claims 2-6, 9-13, 15, 18-20, and 22 is respectfully requested.

C. Rejections to Claims 6, 7, 14, 16, 21, and 23 under 35 U.S.C. § 103(a):

Claims 6, 7, 14, 16, 21, and 23 were rejected under U.S.C. §103(a) as being unpatentable over Chiu or Walck et al., either alone, or in combination with Jones et al. Each of those claims depend from one of independent claims 1, 8, and 17, and each include the feature of a mounting element including a passage in communication with the interior of the vessel that was discussed in the preceding sections.

As discussed above, Chiu describes adjustable ring light for use in more general applications and does not describe using the ring light in conjunction with a vessel, or a vessel interior. Therefore does cannot describe -- and does not teach or suggest -- the claimed feature. Furthermore, Walck et al. teaches against the claimed feature by describing just the opposite: the passage within the housing 12 in Walck et al. is not “in communication with” the vessel interior, but instead is hermetically sealed off from the vessel interior.

Jones et al. describes a protective covering for a medical instrument such as an endoscope that includes an elongated hollow sheath having a wall of flexible material. Applicants respectfully submit that Jones et al., at best, is only remotely related to the claims of the present invention and likewise provides no teaching or suggestion for the missing feature.

Applicants respectfully submit that none of the references of Chiu, Walck et al. and Jones -- either alone or in combination with one another -- teach or suggest the mounting element having a passage that is in communication with the interior of the vessel that is present in each of the rejected claims.

Accordingly, withdrawal of the rejections to claims 6, 7, 14, 16, 21, and 23 is respectfully requested.

D. Additional Amendments:

Applicants have also amended claims 20 and 21 to change the phrases “camera” and “camera unit” to “radiation detection unit” so as to cure any antecedent basis problems that may

have existed. In addition, applicants have added new claims 24-26, which depend, respectively, from independent claims 1, 8, and 17 and recite that the vessel includes a process pipeline. Support for that feature is found, for example in Figs. 5 and 6. No new matter has been added.

Allowance of amended claims 20 and 21 and of new claims 24-26 is respectfully requested.

CONCLUSION

In view of the amendments made and arguments presented, Applicants respectfully submit that the presently pending claims are in condition for allowance.

An early and favorable action on the merits is earnestly solicited.

Respectfully submitted,
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